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Biotechnology Notes

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Biotechnology Notes, a compilation of agency activities, news events, and upcoming meetings, is prepared for members of the U.S. Department of Agriculture's (USDA) Committee on Biotechnology in Agriculture (CBA) by USDA's Office of Agricultural Biotechnology (OAB).

INSIDE USDA

ABRAC DISCUSSES AQUATIC RESEARCH AND RESEARCH PRIORITIES

USDA's Agricultural Biotechnology Research Advisory Committee (ABRAC) met December 16-17 in Arlington, Virginia to discuss performance standards for aquatic research, high-impact opportunity areas for ag biotechnology research, and the societal/ethical concerns of food biotechnology.

Aquatic Research Standards:

ABRAC discussed the proposed scope of organisms for "Performance Standards for Safely Conducting Research with Genetically Modified Fish and Shellfish." Experts who met at a workshop last August recommended a scope definition based on genotype rather than phenotype. [**Genotype** refers to the genetic makeup of an organism; **phenotype** refers to the observable properties of an organism produced by the interaction of the genotype and the environment.] Risk assessment under the standards evaluates phenotype, but most workshop participants felt that in defining when to use the standards, changes in genotype provide more practical, less subjective criteria. They also recommended that offspring of traditional breeding and certain commonly stocked hybrids be excluded.

Some members of ABRAC expressed concern that the proposed scope definition was inconsistent with the fundamental principles of product versus process that underpin the 1986 Federal Coordinated Framework for Regulation of Biotechnology. ABRAC decided to withhold any decision on the proposed scope definition until it can review the revised document. For more details, please call Maryln Cordle at 703-235-4419.

Research Priorities:

ABRAC members were asked to contribute ideas for future areas of Federal funding. Suggestions included developing a vehicle for delivering phytase (a plant degrading enzyme) into animal feed, furthering research into the genetic modification of turf grasses,

studying the genetic manipulation of beneficial microbes of sucking insects, and improving cell wall structure of trees and plants used for fibers and/or food.

USDA SEEKS PUBLIC COMMENTS REGARDING SOYBEANS

USDA's Animal and Plant Health Inspection Service (APHIS) issued a notice December 6 asking the public for its comments regarding a petition submitted by Monsanto Company. Monsanto is requesting a determination that its glyphosate-tolerant soybean line, 40-3-2, be removed from regulation because, according to the company, the soybeans have no potential to pose a plant pest risk. Comments must be received by APHIS on or before February 4, 1994. For more details, refer to the *Federal Register*, Dec. 6, 1993, Volume 58, No. 232, page 64287, or call Shirley Ingebritsen at 301-436-7601.

BIOSAFETY MEETING SEEKS EXPERTS

Planners for "The Third International Symposium on The Biosafety Results of Field Tests of Genetically Modified Plants and Microorganisms" are now seeking names of experts with first-hand field testing experience to participate as panelists. The symposium takes place November 13-15 in Monterey, CA. The agenda is divided into the following sessions and panel topics:

Session A: Critical Issues

Topic I. Are Risks Scale Dependent? Can Small-Scale Results be Extrapolated?

Topic II. Are There Unique Risks When Testing in Centers of Diversity?

Topic III. Food Safety: Does Classical Toxicology Offer a Useful Perspective in Assessing the Food Safety of Products Produced by Biotechnology?

Session B: New Releases

Topic IV. Experiences in Approaching Commercialization of Crop Plants

Topic V. Experiences with Plant-Associated Microorganisms

Topic VI. Experience with New and Unique Organisms and Products

Nominations for panelists should be faxed to either Alvin Young at 703-235-4429 or to Martha Steinbock at 510-987-0069.

NEWS AROUND THE NATION (AND THE WORLD)

BIOTECH COMMUNICATION NETWORK LAUNCHED IN CANADA

Canada's food biotechnology communications network was launched in Ottawa on November 24, 1993 with the first of a series of one-day communications forums. They are industry-led and meant to address key communications, public policy, and regulatory issues affecting food biotechnology. For more details about the network, call Randal Goodfellow at 616-235-5360; Fax: 613-235-5866.

BIOTECH EDUCATION CONFERENCE PLANNED

The Second International Biotechnology Education Conference will take place October 25-30, 1994 in the San Francisco Bay area. The conference targets science teachers, scientists, and education leaders in colleges and universities, industry and government. It will emphasize international instructional resources for K-14 science education. For more details call Kristine Bruns, University of Wisconsin-Madison, at 608-263-4431; Fax: 608-265-2329.

MORE TEACHER EDUCATION WORKSHOPS SCHEDULED FOR '94

Three hundred forty-six agriculture and science teachers participated in a dozen teacher training workshops in 1993. All were sponsored by American Cyanamid's Agricultural Division in Princeton, NJ. Teachers shared their knowledge about biotechnology with a total of 31,000 students. The company says it uses a "hands-on" method of teaching the teachers because this concept enables the teachers to incorporate the experiments into their classrooms almost immediately.

The 1994 workshops include a teacher-industry-environmental program, February 4-5, and a biotechnology session March 6-7 in Princeton. For more information call Fred Stillwagen at 215-432-0816.

MAJOR COTTON PATENT GRANTED

The Patent and Trademark Office issued a patent October 27, 1992 for genetically modified cotton to Agracetus, a subsidiary of W. R. Grace and Company. The patent will be in effect for 17 years and gives Agracetus broad authority over all cotton genetically modified as a result of biotechnology methods. This patent does not cover changes by conventional breeding methods.

National Public Radio carried a story December 6 highlighting hypothetical problems that may be associated with such a patent. Hope Shand of Rural Advancement Foundation International was among those who were interviewed by NPR reporter Daniel Zwerdling. She speculated that W. R. Grace "will have the power to control major development in the nation's fourth biggest crop."

A conference was sponsored by the Crop Science Society of America last year at which Dean Plowman, acting USDA Assistant Secretary for Science and Education, discussed protection of plant materials. He said the question of how to continue to maximize genetic progress while at the same time realize the economic benefits from patenting is perhaps "the most complex and serious question we will face in the next decade."

Stay tuned for more discussion as the issue of patenting genetically engineered crops becomes more transparent.

MARINE BIOTECH GRANTS ANNOUNCED

The National Sea Grant College Program is accepting proposals in marine biotechnology for projects that last 1 to 3 years beginning August 1, 1994. The focus will be on research opportunities, although advisory and education proposals are also eligible to compete for funds from an appropriation of \$3.2 million. The preferred areas for proposals include aquaculture, biomaterials/biosensors, bioprocessing/environmental remediation, policy/economics, and education/technology transfer.

The maximum annual project budget that will be considered for single and multiple investigators is \$75,000 and \$500,000, respectively. As required by law, at least one third of the total cost of all projects must come from non-federal matching funds. For more information, please write to David Attaway, National Sea Grant College Program, National Oceanic & Atmospheric Administration, 1335 East-West Hwy., Silver Spring, MD 20910.

OPPOSED TO OPPOSITION VIEW

Writing in the October 1993 issue of *Bio/technology* ("Is Public Opposition to Biotechnology Real?"), author Bernard Dixon takes a stand against the position that the public is resistant to biotechnology. He believes "the majority of people are well aware of the value of scientific research as applied in health care, agriculture, and elsewhere." He says opposition to biotechnology is generally confined to small interest groups and does not reflect widespread disenchantment of the overall population. Dixon does caution, however, that public trust cannot be taken for granted. "You need to work hard and continuously to build and retain public confidence."

IN CASE YOU WEREN'T THERE

■ **"Science for Policy: Knowing What We Need To Know"** was the topic of a seminar presented by Sheila Jasanoff at the Brookings Institution, December 8. Jasanoff, professor and chair in the Department of Science and Technology Studies at Cornell University, Ithaca, New York, said there are two important myths about science: 1) science is all political; and 2) science is all truth. She elaborated on both myths using an alternative model to the one commonly used to compare scientific knowledge to policy. She said agencies should re-think why they turn to science for legitimacy. The problem, said Jasanoff, is not about getting more and better science but of avoiding getting people together to offer them different and difficult trade-offs. She said risk assessment is related to uncertainty and uncertainty is not always related to science but can be related to cultural/sociological factors.

■ **The Environmental Protection Agency's (EPA)** Office of Prevention, Pesticides and Toxic Substances held a 1-day information-gathering meeting December 16 to discuss biotechnology issues. EPA plans to publish two proposals during 1994 dealing with regulation of biotechnology products including a proposal addressing microorganisms under the Toxic Substances Control Act, and a proposal dealing with pesticidal substances produced by plants under the Federal Insecticide, Fungicide, and Rodenticide Act and the Federal Food, Drug, and Cosmetic Act. For more information call Ms. Creavery Lloyd at 202-260-6900.

■ **Karen Rogers, president of KKR & Company**, Northbrook, IL, spoke on biotechnology education at the December 17 ABRAC meeting in Arlington, VA. She reviewed recent public opinion surveys citing that women are less favorable towards biotechnology than men and that biotech education should have started 10 years ago. She said more than 75 education initiatives are underway in 39 states, aimed mainly at curricula development. However, little is being done to educate the adult consumer. She said surveys show the public's faith in science and technology is decreasing. "Critics of biotech have at least an 11 year jump on biotech communications with the consuming public," said Rogers. She recommended that communicators first focus on global issues such as disease and food production and then explain how biotech can make a difference. She stressed the importance of discussion that includes the potential risks as well as the benefits. Copies of Rogers' presentation are available by sending a fax to 703-235-4429.

NEW PUBLICATIONS

■ *Regulating Risk: The Science and Politics of Risk*. Published by the International Life Sciences Institute, Washington, DC. To order call 202-659-0074; Fax: 202-659-8654.

- "Public Understanding of Science." Volume 2 1993. A journal published quarterly by the Institute of Physics, Great Britain. To order in the USA, Canada, and Mexico, call 215-627-0880; Fax: 215-627-0879.

- "BioResearch Ireland's 1992 Annual Report." Includes Director's report, activities, achievements, structure, management, and financial statement. To receive a copy, call 353-1-370177/370101; Fax: 353-1-370176.

- "Genetically Engineered Foods: Fears and Facts." An interview with James Maryanski. May 1993 reprint of an article that appeared in the January/February 1993 issue of *FDA Consumer* magazine. To order write to FDA, HFI-40, Rockville, MD 20857.

- *Agriculture and Human Values*. Volume X, No. 2 includes eight articles about agricultural biotechnology. Edited by Richard Haynes. To order write to Haynes at 6802 S.W. 13th St., Gainesville, FL 32608 or call 904-392-2080.

- *Developing Agricultural Biotechnology in the Netherlands*. Edited by D. Vuijk, J. Dekkers, and H. van der Plas. Pudoc Scientific Publishers, Wageningen, The Netherlands. 1993. For information on ordering, please write to Pudoc, P.O. Box 4, 6700 AA Wageningen, The Netherlands.

- *Agricultural Biotechnology: Issues and Choices*. This popular collection of articles published in 1991 by the Purdue Research Foundation has been re-ordered. A limited number of copies are available from USDA's OAB. To receive one, please send a request by fax to 703-235-4429.

- *Ag Industrial Materials & Products*. A quarterly trade newspaper that focuses on new uses for renewable agricultural products. For details about ordering, call 612-854-9005; Fax: 612-854-8458.

UPCOMING MEETINGS

- Jan. 9-16:** "Improved Crops Through Biotechnology Conference." Keystone, CO. Call Nancy Craig for details at 303-262-1230; Fax: 303-262-1525.
- Jan. 24-25:** "Genetically Engineered Animal Models and their use in Therapeutic Development." San Diego, CA. Call 508-481-6400; Fax: 508-481-7911.
- Jan. 24-27:** International Plant Genome II Conference. San Diego, CA. For details call 212-643-1750.

Jan. 24-27: BioEast '94. Washington, DC. Sponsors include Genetic Engineering News. For details call 301-652-3072; Fax: 301-652-4951.

Jan. 26-27: Regulatory Drafting and Process Course. Washington, DC. Sponsored by the Regulatory Group Inc. Call 202-628-1408.

April 20-21: Fourth New England Animal Biotechnology Symposium. Storrs, CT. Call 203-486-0861; Fax: 203-486-1072.

May 3-6: "Biotechnology Applications in Space." University Park, PA. Penn State Biotechnology Institute. For course details call Patricia Phillips at 814-863-3650; Fax: 814-863-1357.

May 23-24: NABC6: "Agricultural Biotechnology and the Public Good." East Lansing, MI. For details write to NABC, 159 Biotechnology Bldg., Cornell University, Ithaca, NY 14850-2701; or call 517-355-0123; Fax: 517-353-5406; E-mail: 18215emh@ibm.cl.msu.edu

June 25-28: "Second International Weed Control Congress." Copenhagen, Denmark. Co-sponsored by the International Weed Science Society and the European Weed Research Society. For details write to ICS, International Conference Services A/S, Strandvejen 171, P.O. Box 41, DK-2900, Hellerup, Denmark.

July 3-8: "Seventh International Congress of Bacteriology and Applied Microbiology Division and the Mycology Division." Prague, Czech Republic. Sponsored by the Czechoslovak Society for Microbiology. For details write to SCS Travel Agency Ltd., IUMS Congresses '94, Boticka 4, 128 00 Prague 2, Czech Republic; or call 42 2 297 698; Fax: 42 2 299 955.

NOTES

Biotechnology Notes is prepared by Marti Asner, USDA/OAB communications specialist. All requests for a change of address should be accompanied by a previous mailing label. Comments are always appreciated and may be sent to USDA/OAB, Room 1001, RP-E, 14th and Independence Ave., S.W., Washington, DC 20250-2200; Tel: 703-235-4419; Fax: 703-235-4429; Internet: masner@csrs.esusda.gov.

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